

August 22, 2019



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 20898

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of prototype and low production lithium ion batteries and battery-powered vehicles aboard cargo-only aircraft. This special permit provides no relief from the Hazardous Materials Regulations (HMR) or the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
 - d. This special permit serves as an approval under Special Provision A88 and State Variation US 3 of the ICAO TI and paragraph 2) of "Batteries" of Packing Instruction 952 of the ICAO TI and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180 and the ICAO TI.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that the net weight of each battery may not exceed 35 kg, § 173.185(a)(1) in that each lithium battery must be of the type proven to meet the criteria in Part III, subsection 38.3 of the UN Manual of

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Tests and Criteria, and § 173.185(b)(3)(i) and (ii) in that each battery must be packaged in a non-metallic inner packaging within a UN-standard packaging, except as specified herein.

5. BASIS: This special permit is based on the application of Rivian Automotive, LLC dated June 5, 2019 submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Battery-powered vehicle*	9	UN3171	N/A
Lithium ion batteries*	9	UN3480	N/A

*Only prototype and low production lithium ion batteries and battery-powered vehicles containing prototype and low production lithium ion batteries may be offered for transportation under the terms of this special permit. ("Low production" is defined as a production run of no more than 100 cells or batteries annually of a particular type.) Each different battery type must comply with all the conditions of this special permit prior to being offered for transportation.

7. SAFETY CONTROL MEASURES:
- a. OPERATIONAL CONTROLS:

(1) The maximum rated energy capacity of the battery comprised of LG cells (Model: INR21700M48) may not exceed 150 kWh.

(2) Each battery must be comprised of a 9-module string. Each module must be comprised of cells in a 12S72P configuration.

(3) Each battery must be fitted with a battery management system that has been verified as preventing overcharge, short circuits, and over discharge between the strings.

(4) The battery must be equipped with a coolant manifold.

(5) The state of charge for each lithium ion battery (UN3840 only) may not exceed 30% when offered for transportation.

(6) The batteries must be equipped with an effective means of preventing dangerous reverse current flow for the strings that contain cells connected in parallel.

b. TESTING REQUIREMENTS: Cells must be of a type that has been successfully tested in accordance with Part III, Section 38.3, of the UN Manual of Tests and Criteria, Fifth Revised Edition.

c. PACKAGING:

(1) Each battery must have a mass of 12 kg or greater and have a strong, impact-resistant outer casing.

(2) Each battery (UN3480 only) must be packaged within a plywood crate. Each battery must be secured within the plywood crate with eight lag bolts. No more than one battery may be packaged within a plywood crate.

(3) Each battery within a vehicle must be securely fastened in the battery holder with 12 high-tensile bolts. Each vehicle may contain not more than one battery.

(4) The net weight of the battery within a single package may exceed 35 kg but may not exceed 950 kg.

d. MARKING REQUIREMENTS: Each package, and overpack if used, prepared under the provisions of this special permit must be plainly marked with the special permit number: DOT-SP 20898.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this special permit, the HMR, and the ICAO TI.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

c. This special permit in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of countries of origin, transit, and destination.

d. The special permit grantee must maintain the following record and upon request make this information available to DOT representatives or enforcement officials. The record to be maintained is as follows:

(1) Dates of shipment; and

(2) Description of each type of shipment.

9. MODES OF TRANSPORTATION AUTHORIZED: Cargo-only aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special

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permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve H